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of West Farms, which was then a suburb but is now a portion of the City of New York. The last years of Prof. Wood's life were mainly employed in revising and republishing his several text-books on botany, which include the following works: "Class-Book of Botany," (1845); "Object Lessons in Botany" (1862); "Botanist and Florist" (1870); "Plant Record" (1872); "Fourteen Weeks in Botany" (1879, written jointly with Prof. J. D. Steele); and "Flora Atlantica" (1879). In addition to these educational works, Prof. Wood wrote a "Monograph of the Liliaceae," which was communicated to the Philadelphia Academy of Natural Sciences, and published in its Proceedings of June, 1868. At the time of his death he occupied the Chair of Botany in the New York College of Pharmacy, a position which he had filled for two years.*

§ 49. The Preparation of Fleshy Pileate Fungi for the Her**barium**.‡—To the preparations previously described, still others may be added. If it be desired to exhibit, in a lamellate species, a view of the under surface of the pileus with the gills, the fleshy portion of the upper surface of one of the halves must be shaved off close to the gills, and the preparation laid, gills upward, on moist gelatinepaper, and submitted to pressure as before described. This proceeding is not well adapted for all lamellate fungi, but succeeds best with those species which, like Cantharellus, have decurrent gills: for these it is of great value. To prepare such fungi as these, a vertical section is made and from one or both of the halves the flesh is so nearly all removed that but just sufficient is left to support the gills. Then the flesh is removed from the interior of the stipe, and the fungus is ready for the gelatine-paper and press. The very small lamellate fungi, whose fleshy substance is very thin, may be simply dried between bibulous paper, under pressure, without any preparation, and afterwards be kept in paper envelopes. Of most of these species, however, there can be made very good vertical sections, which, after being dried on gelatine-paper, may be placed in the envelope with the other specimen. The species of the genus Marasmius are composed of a tough substance, which, after being dried, becomes soft again when placed in water. The larger fungi of this genus likewise may, therefore, be dried without preparation, since the specimens thus treated, on being moistened with water, assume again their original form, just as mosses and lichens do under the same It is, nevertheless, recommended that a few specimens of each species of this genus be also prepared by the method under consideration.

We now come to the details of the method, which hitherto has been described only in a general way.

In most of the *Agaricini* there are found between the lamellae which radiate from the stipe to the circumference of the cap a few shorter ones, which start from the edge of the pileus but do not reach the stipe; and these are of various lengths. Often, too, the lamellae

^{*}Abstract of a "Biographical Sketch of Prof. Wood," read by Dr. O. R. Willis before the Torrey Botanical Club, March 8th.

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(especially in species of Russula) branch one or more times before reaching the edge of the pileus. When, therefore, a longitudinal section of one of these fungi is made, care should be taken to have only the full-length gills appear; and if, in the first section, one or two short gills stand in front of them, these should be cut away until the longer ones are reached. After making the section, which should be as thin as possible, it is fastened to the gelatine-paper with the long gills upward. It should be remarked that the thinner the section is made the easier it dries and the better the preparation keeps. Sections of species of Boletus are easily made because the cutting is done in the direction of the tubes. The same is the case

with species of Hydnum.

Whenever it is possible, section-specimens of each species should be prepared to show the plant in its various stages of development. As soon as the fungus has arisen from its mycelium and just shows the arrangement of stipe, pileus, lamellae, or pores, or spines, as the case may be, a section of it should be made at this stage. show whether the species when young is enveloped in a universal veil, which, subsequently rupturing, remains as a volva at the base, a ring on the stipe and as floccose patches on the pileus (as in Agaricus muscarius, A. rubescens, etc.), or whether the margin of the pileus is involute (as in Collybia) or straight (as in Mycena), etc. When the stipe has still further developed, and the ring (when present) has separated from the pileus, another section should be made; and the same should be done with species provided with a veil, at the stage when the latter still connects the edge of the pileus with the stipe. With fungi having a ring of a delicate texture (Amanita, for example), great care and considerable skill are requisite in making the section, to avoid tearing the ring while cutting through it lengthwise. If the ring is movable (as in Agaricus procerus) it may be cut through at some one point and removed, to be afterwards placed on the preparation which gives a profile view of the fungus. The same care should be exercised in dividing those species which, like Agaricus muscarius, A. phalloides, A. Mappa and A. vaginatus, are provided with a volva at the base, in order that the section may show to what extent the bulbous portion and its margin are adherent to the stipe.

If it is a peculiarity of any species to vary greatly in size and shape, sections should be made of each of the different forms. When, as frequently happens in such species as *Hydnum imbricatum*, several fungi grow so closely together that their stipes and caps coalesce, sections should also be taken through two or more of the individuals thus joined together. Sections and other preparations of the genus *Coprinus* can be made from young specimens only, because of the peculiarity that these fungi have of dissolving at maturity into an

inky fluid.

It will be found that the adherence of the sections to the gelatinepaper varies greatly according to the nature of the fleshy substance of the plant. Such fungi as *Boletus*, *Amanita* and *Hygrophorus*, whose flesh is of a soft, moist nature, adhere very quickly and readily. If the stipe of a species be of a cartilaginous, dry nature and the pileus be of a soft one, the pileus portion of the section will adhere very firmly to the gelatine-paper, while the stipe after drying may become easily detached therefrom. Sections, as well as other preparations, of the genera Russula and Lactarius do not adhere well; the fleshy substance of the former is firm, compact, or even floccose, and that of the latter contains a milky liquid. Such preparations may be made to stick better by moistening them with water before laying them on the gelatine-paper. Frequently also the lamellae do not adhere to the paper, probably owing to the copious detached spores. The portion of a preparation which does not adhere properly may be fastened down effectually with a solution of one part of gelatine in thirty parts of boiling water; the solution, after it is somewhat cool, being applied between the specimen and paper by means of a camel's hair pencil, and the specimen being pressed down on the paper and allowed to dry. It sometimes happens in preparations of fungi which have a viscid pileus, that, in the first pressing, portions of the pileus adhere to the overlying drying-paper. In such cases the specimen may be readily detached, without injury to it, by dampening the dryer slightly with a wet sponge.

After the preparations are dry they are to be cut out of the gelatine-paper with a pair of scissors, the paper being trimmed away as closely as possible to the specimen, so that the latter shall exhibit itself with sharp contours when finally gummed to card-board.

§ 50. Mertensia Virginica, DC., in New Jersey.—On the 6th of

May, 1880, I brought home some specimens of this elegant plant which I had obtained near the extreme western edge of Monmouth County, N. J. I found my friend Mr. R. Willis Brown on a visit at my house, showed him the plants and proposed that he should stay all night and go with me next day to the locality, which was nearly twenty miles away. The season was too much advanced, as that May was unusually hot and dry, for we found the plants not in the finest condition. Desirous of working the subject up, so as not to be found pushing into the BULLETIN a notice of a mere fugitive or recent escape, I desired my friend to say nothing about it for the present. I have worked a good deal on the case and now feel confident that my find is worthy a place in the indigenous flora of our State, for these reasons: 1. I cannot find among the people, old or young, of these parts, any recollection of it as a garden-plant. question has elicited a reply indicative of surprise: "Grow in gardens! Why it is a wild-flower! " 2. It has been known as a wild-flower for a number of years—how many I cannot say. 3. I have now found three localities where it grows, each several miles from the other.

Should any one desire to visit a habitat for collecting, the one easiest found is on the Crosswick Creek, close to the north side of the bridge at Walnford. May I not be pardoned a pleasurable pride in adding this exquisite Virginia cowslip to the flora of New Jersey. SAMUEL LOCKWOOD.

4. The plants have enormous tap-roots, showing them to be well established. In truth, it is not easy to get a plant up with a moderate share of its root, so deep into the earth does the latter extend.

Freehold, N. J., April 2, 1881.